



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/886,475	06/22/2001	Akitoshi Tsuji	P 281417 EL01003CDC	4933
909	7590	10/07/2005	EXAMINER	
PILLSBURY WINTHROP SHAW PITTMAN, LLP			FISHER, MICHAEL J	
P.O. BOX 10500			ART UNIT	
MCLEAN, VA 22102			PAPER NUMBER	

3629

DATE MAILED: 10/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/886,475

Applicant(s)

TSUJI ET AL.

Examiner

Michael J. Fisher

Art Unit

3629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Ch

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-6 and 10-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In claims 1 and 29 is the limitation, "display means for displaying the amount of heat discharged as obtained by the heat calculating means..." There is no limitation that obtains the amount of heat, there is a "factor measuring means for measuring factors needed to obtain the amount of heat..." that measures factors needed to obtain the heat but does not measure heat and therefore, it is unclear exactly how the "discharged heat calculating means" actually calculates discharged heat.

As to claim 25, it is unclear where the "crude oil" is used. It would appear that the claim is measuring something at a "crude oil" powered, electrical plant. As the instant invention is not related to such there is no enablement for this limitation. Further, as crude oil is refined before use, this would appear to be impossible given the limitations on the claims as one would have to measure many factors in the refining process, which is outside the purview of the instant application.

Claims 26 and 27, which have the same limitations, are also rejected for this reason and will not be rejected under art as they are outside the purview of the instant application.

Claims 2-5, 10-24,28 and 30-35 are rejected as depending from a rejected claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-23 and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over US PAT 6,324,527 to Bajuk et al. (Bajuk).

As to claims 1,29 Bajuk discloses tracking consumption of resources used in the manufacture of semi-conductors (70, as best seen in fig 7 "chemical use, consumables use, raw process times), electrical power consumed (73, as best seen in fig 7,

Art Unit: 3629

"operation cost"), the devices measured under "operation cost" would be those that create the heat discharged and therefore, would inherently measure the factors needed to obtain the amount of heat discharged as the equipment that produces the heat is measured, Bajuk discloses measuring the items on a per-unit basis (fig 4) and displaying the results (fig 4).

As to claim 2, Bajuk further discloses fluid that is a temperature control fluid (col 5, lines 51-55).

As to claim 3, the fluid is air (col 5, line 58).

As to claim 4, the fluid is a gas (col 5, line 58).

As to claim 5, it is very well known in the art to use water as a coolant. Therefore, it would have been obvious to one of ordinary skill in the art to use water as a coolant as this is another coolant and therefore, not patentably distinct.

As to claim 6, Bajuk discloses the equipment in a housing in a clean room (col 3, lines 1-13).

As to claim 7, Bajuk discloses a heat exchanger (col 4, lines 34-36). Therefore, it would have been obvious to one of ordinary skill in the art to measure the heat difference to ensure that the heat exchanger used is the best for the application.

As to claims 8,30 it would have been obvious to one of ordinary skill in the art to use multiple points to ensure the readings are accurate as the exact amount of heat would be important to avoid damaging the chips.

As to claim 9, Bajuk discloses exhaust fans (34), it would have been obvious to one of ordinary skill in the art to measure air flow (wind speed) to ensure the exhaust

Art Unit: 3629

fans are adequate. Further, it is well known in the art to use wind speed for temperature equations.

As to claim 10, the exhaust path would inherently be exhausted out of the clean room to keep the room clean. The heat would inherently be that which was removed by the exhausted gas.

As to claim 11, Bajuk discloses a heat exchanger (col 4, lines 34-36). Therefore, it would have been obvious to one of ordinary skill in the art to measure the heat difference to ensure that the heat exchanger used is the best for the application, Bajuk discloses exhaust fans (34), it would have been obvious to one of ordinary skill in the art to measure air flow (wind speed) to ensure the exhaust fans are adequate. Further, it is well known in the art to use wind speed for temperature equations.

As to claim 12, as discussed above, the equipment is cooled by cooling fluid and the heat would inherently include some heat removed by the fluid.

As to claim 13, Bajuk discloses fluid flow (fig 6). It would have been obvious to measure the flow and the temperature to ensure the temperature readings are accurate.

As to claim 14, Bajuk discloses using a computer (abstract, lines 1-2).

As to claim 15, it would have been obvious to one of ordinary skill in the art to put the computer on a cart so it could be used at various machines.

As to claim 16, it would be obvious to one of ordinary skill in the art to detach the computer from the measuring means so either the measuring means or the computer could be replaced separately.

Art Unit: 3629

As to claim 17, it would be obvious to keep the factor measuring means attached to the measuring point to ensure the measuring means is not lost.

As to claim 18, Bajuk discloses tracking costs (title), and a means for calculations (computer) and a display (the monitor of the computer).

As to claim 19, Bajuk discloses measuring power (operating costs).

As to claims 20,31, Bajuk discloses measuring the costs on a per-unit basis and displaying them (fig 4).

As to claim 21, as discussed above, the equipment is cooled and Bajuk discloses measuring the costs on a per-unit basis.

As to claim 22, Bajuk discloses tracking costs (title), which costs would included cooling means.

As to claim 23, Bajuk discloses tracking costs (title), which costs would include cooling means.

Claims 24,28 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bajuk as applied to claims 1-23 and 29-31 above, and further in view of US PAT 3,961,895 to Frenyo.

Bajuk discloses a system as discussed above.

As to claims 24,32, Bajuk does not, however, teach measuring carbon dioxide.

Frenyo discloses a device for measuring carbon dioxide (title).

It would have been obvious to one of ordinary skill in the art to use the device as taught by Frenyo in the system as disclosed by Bajuk as Frenyo teaches this as a good way to measure carbon dioxide in industrial processes (col 1, lines 21-25).

As to claim 28, as discussed above, Bajuk discloses obtaining the costs of manufacture on a per unit basis and further, Frenyo discloses a device for measuring carbon dioxide (title).

It would have been obvious to one of ordinary skill in the art to use the device as taught by Frenyo in the system as disclosed by Bajuk as Frenyo teaches this as a good way to measure carbon dioxide in industrial processes (col 1, lines 21-25).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US PAT 6,355,874 to Yagi et al. teaches measuring carbon dioxide to alleviate the emissions due to global warming, US PAT 5,249,120 to Foley discloses a system and method for calculating the cost of manufacturing items.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Fisher whose telephone number is 571-272-6804. The examiner can normally be reached on Mon.-Fri. 7:30am-5:00pm alt Fri. off.

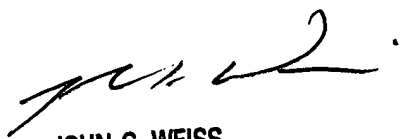
The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3629

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MF 

10/03/05


JOHN G. WEISS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600